

REMARKS

The Office Action mailed January 7, 2002, has been reviewed and the Examiner's comments carefully considered. Claims 1-10 remain pending and are submitted for reconsideration. Claims 1, 9 and 10 are independent claims.

Claim 4 has been amended as requested by the Examiner, withdrawal of the objection is respectfully requested.

The present application discloses a human body proximity sensor for detecting the extent of proximity between the passenger and the seat, and means for determining the presence of a passenger in the seat. In one exemplary embodiment, the human body proximity sensor includes electrodes embedded in the seat. The capacitance between the electrodes changes when a human body is placed in the seat. However, when a child seat is placed in the seat the capacitance between the electrodes is unaffected. Thus, a clear advantage of this feature is that it can discriminate between a child and a child seat.

(Paragraph 15, lines 9-10.)

Claims 1-10 are rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,074,583 (Fujita). The rejection should be withdrawn because Fujita fails to disclose, teach or suggest the claimed invention. For example, Fujita fails to disclose, teach or suggest a "human body proximity sensor for detecting the extent of proximity between the passenger on the seat and the seat" as called for in claims 1, 9 and 10. Further by way of example, Fujita fails to disclose "a means for determining the presence of the passenger on the seat and for discriminating the type of passenger" as called for in claims 1, 9 and 10.

Fujita discloses pressure sensors 35 configured to measure a pressure distribution across the seat. (Col. 6, lines 46-51). The Examiner contends that Fujita the pressure sensors 35, disclosed by Fujita, anticipate the human body proximity sensor and means for determining the presence of a passenger on the seat as called for in claim 1. However, the pressure sensors 35 are merely seat weight sensors. Fujita does not teach, suggest, or disclose that the sensors 35 can detect the extent of proximity between the passenger and the seat, or determine the presence of a passenger on the seat. For example, the sensors 35 disclosed by

Fujita cannot differentiate between a 50-pound child and a 20-pound child seat holding a 30-pound infant, and, thus, cannot detect the extent of proximity between the passenger and the seat. Furthermore, sensors 35 cannot differentiate between a 150-pound human and a 150-pound non-human object, and thus cannot determine the presence of a passenger on the seat.

The pressure sensor 35 of Fujita detects the changes in pressure acting on the seat. Multiple pressure sensors are provided to detect the pressure distribution on the seat. The sensor does not function until an object sits on the seat. Thus, the sensor does not detect the proximity of a human body. Furthermore, the sensor 35 disclosed by Fujita can only discriminate between two different passengers (e.g. adult and child) if an assumption is first made that the seat contains a human body. The claims call for “a means for determining the *presence of a passenger*” on a seat. As mentioned above, the system disclosed by Fujita fails to disclose a means that utilizes both the seat weight sensor 35 and a human body proximity sensor to determine the presence of a passenger. Thus, withdrawal of the rejection is appropriate.

The Examiner also refers to the size sensor 47 disclosed by Fujita. The size sensor 47 is an ultrasonic sounding device that measures the return of an ultrasonic wave to detect a height of a passenger on a seat. (Fujita at col. 9, lines 57-63). However, similar to the pressure sensor 35, the size sensor 47 cannot discriminate between an inanimate object and a human body. The sensor 47 will treat any sound wave return as having been reflected by a human body. Thus, the sensor 47 is neither a human body proximity sensor or a means for determining the presence of a passenger on the seat.

Accordingly, reconsideration and withdrawal of the rejection of claims 1, 9 and 10 is respectfully requested.

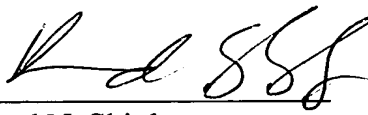
Claims 2-8 depend from claim 1 and are allowable therewith, for at least the reasons set forth above, without regard to the further patentable limitations contained in these dependent claims.

Conclusion

In view of the foregoing, Applicant submits that the application is in condition for allowance. An early Notice of Allowance is respectfully requested. If there are any questions regarding the prosecution of this application, the Examiner is invited to contact the undersigned attorney at the phone number listed below.

A Petition for Extension of Time is enclosed. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741.

Date: 4/30/2002

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VERSION SHOWING CHANGES MADE

In the Specification:

Please replace paragraph 7 beginning on page 1 and bridging page 2.

Accordingly, with the aim of controlling deployment of the airbag, it is required to recognize the type of the person being seated on the seat and to recognize the presence or absence of a child seat. For such recognition, in the related art, a seat weight sensor for measuring the weight of an object placed on the seat, and for the discrimination of a child seat (including the case where an infant is seated), a child, or an adult has been developed. This type of seat weight sensor is known as shown in Japanese Unexamined Patent Publication No. [2000-12463] 2000-121463.

In the Claims:

4. (Amended) The passenger discriminating apparatus of claim 3, wherein the means of determining apparatus is configured to determine that a child is sitting directly on the seat when the output of said seat weight sensor exceeds the first threshold value and is not more than a second threshold value and when said human body proximity sensor detects the proximity of the human body.